

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2015/2016

**TPM3231 – IT PROJECT MANAGEMENT METHODS AND
TOOLS**

(All sections / Groups)

12 MARCH 2016
2.30 p.m. – 4.30 p.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of 4 pages not including the cover page.
2. Attempt FIVE out of SIX questions.
3. You are allowed to use calculators in this examination.
4. Please write all your answers in the Answer Booklet provided.

Answer FIVE questions only.

QUESTION 1

Mr. Foo has been the key-person in managing OMG College class timetable manually since the past five years. Recently, he decided to quit his job to start a new business. Hence, OMG College is in dire need for a new timetabling system which is assumed to make the process faster and more efficient. The stakeholders decided to hire an established IT solutions company for the purpose. They allocated RM100,000 and hired Mango Solutions Sdn. Bhd. to develop the system within six months.

- (a) Based on the scenario above, identify FOUR possible stakeholders of the timetabling system. [2 marks]
- (b) In your opinion, what are THREE important factors to ensure the success of OMG College's Timetabling System project? [3 marks]
- (c) After conducting a feasibility analysis, the team from Mango Solutions Sdn. Bhd. proposed to introduce a new IT platform to replace the current computing platform which requires annual licensing fee. The new IT platform is free of charge. Based on the four frames of organisations, describe how the new IT platform may be implemented successfully. [4 marks]
- (d) The project manager from Mango Solutions Sdn. Bhd. requested his project team members to submit a Work Breakdown Structure (WBS) within a month from the project initiation date. What is the importance of a WBS in a system development project? [1 mark]

QUESTION 2

Mr. Yahya is the Director of Information Technology in Harmony College of Technology. The use of computer labs at the college had grown tremendously in the past 5 years. He initiated a project called "Lease Laptop Project" where students are required to lease notebooks to facilitate the learning process. He called for a meeting to kick-start the idea and acquired feedback from all faculty members. He needs to analyse the possible incurring costs such as purchasing hardware, operating system, and application software. In addition, he plans to apply this to all students and run a short training.

- (a) Based on the scenario above, illustrate the tasks involved using mind-mapping Work Breakdown Structure (WBS). [5 marks]

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- (b) After twelve months, the "Lease Laptop Project" was completed. Even though the planned value was RM255,000, the Budget At Completion was RM350,000. In addition, the Earned Value was RM190,000 and Actual Cost is RM200,000. Calculate the cost variance (CV), schedule variance (SV), cost performance index (CPI), and schedule performance index (SPI) for the project. [2 marks]
- (c) Evaluate the project's performance based on the cost and time. Use your answer in (b) to support your answer. [2 marks]
- (d) Estimate the most ideal time required to finish the project using the schedule performance index (SPI). [1 mark]

QUESTION 3

Your company is planning to launch an important new project known as "Project Leonard" starting 1st June 2016. The project duration is approximately one year. Assume that the project requires one full-time project manager, two full-time business analysts for the first seven months, three full-time senior programmers for one year, two full-time junior programmers for the months of July, August, and September, and one full-time technical writer for the last three months.

- (a) Prepare a resource histogram based on the requirements for one year. Then, suggest a software tool which is appropriate to create this histogram. [5 marks]
- (b) In a project which includes many team members such as Project Leonard, effective communication skill is important. However, sometimes conflicts may occur between the members. In your opinion, is conflict good for communication? Justify your answer. [2 marks]
- (c) Leonard Project has been identified as an important and major project for your company. In order to complete the project, all project activities must be successfully completed. Briefly describe THREE types of dependencies to illustrate project activities sequencing process. Provide ONE example for each dependency. [3 marks]

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QUESTION 4

The CEO of Mines Hotel, Mr. Lucas appointed Metromax Sdn. Bhd. to improve Mines Hotel Management System with new additional features. These new features shall be completed in three months and expected to support two main processes, i.e. online room reservation and online payment with a cost of RM15,000. Mr. Lucas expects a complete secure system especially related to both room reservation and online payment. However, he made it clear that the cost of the whole project upon completion shall not exceed RM20,000. Mages, who is a senior project manager in Metromax Sdn. Bhd. was appointed as the project manager for this project.

- (a) Assume that you are one of the project members. Describe the triple constraint of the project. [3 Marks]
- (b) The project must be delivered in three months. Hence, Mages is considering two system development methodologies, either the waterfall model or rapid application development model. Advise her by comparing the two models. [5 marks]
- (c) For this project, Mr. Lucas has decided to outsource the project to Metromax Sdn. Bhd. In your point of view, what are the reasons to outsource? Identify FOUR of them. [2 marks]

QUESTION 5

Justin, the owner of Great Solutions wishes to implement the Define-Measure-Analyse-Improve-Control (DMAIC) approach so that the quality of project management within his company can be improved. He knows that DMAIC is a systematic, closed-loop process for continued improvement that is scientific and fact based.

- (a) Assume that you are one of the experienced project managers. Describe the processes of DMAIC to Justin. [2.5 marks]
- (b) The following table shows six main activities for one of Great Solutions multimedia projects. Draw a Precedence Diagramming Method (PDM) diagram to visualize the activities. [5 marks]

Activity	ID	Precedence activity	Start (dd/mm)	Finish	Duration (days)
A	1	-	15/11	16/11	2
B	2	-	15/11	15/11	1
C	3	A	17/11	20/11	4
D	4	B	18/11	19/11	1
E	5	B	20/11	22/11	3
F	6	C, D, E	21/11	21/11	1

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- (c) Based on your answer in (b), identify all possible paths along with the duration. Then, determine the critical path for the project. [2.5 marks]

QUESTION 6

Suppose a recent project includes a preliminary study. The report shows that the tangible cost of the study is RM100,000 and involved project integration management.

- (a) What is a tangible cost? State ONE example. [2 marks]
- (b) Identify SIX main processes involved in project integration management. [2 marks]
- (c) In order to perform successful system integration, testing is compulsory. However, testing alone is not sufficient to prevent system integration failures. Why? [3 marks]
- (d) System integration may include changes to one or more variables on the outcome. Hence, a sensitivity analysis is proposed. Explain sensitivity analysis. Suggest ONE application software which may be used to perform sensitivity analysis. [3 marks]

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